APPENDIX "A"

TO THE AMENDMENT AND COMMUNICATION

FOR APPLICATION SERIAL NO. 09/453,158

SIR OR MADAM:

This Appendix "A" is being provided to show where and how amendments to the claims have been made in Amendment "B" to application serial number 09/453,158. The amended claims are shown below in an interlined format, wherein deleted text is shown in square brackets and added text is shown in underline.

1 (twice amended). A method for determining the location of the accumulation fluids in a subterranean formation, comprising:

determining a first velocity vector "V_x" for migration of fluid in a region of interest in the subterranean formation, the first velocity vector comprising attributes of speed and direction of flow of fluid in a first direction in the region of interest;

determining a second velocity vector "V_y" for migration of fluid in the region of interest, the second velocity vector comprising attributes of speed and direction of flow of fluid in a second direction in the region of interest;

extrapolating the velocity vectors to identify the fluid accumulation location; and

wherein the first and second velocity vectors are primarily functions of supplementary pressure "dP" in the region of interest, the permeability "c" of the region of interest, and the viscosity "u" of the fluid in the region of interest[, and

the supplementary pressure is determined by identifying pressure gradients within the region, said region being characterized by a seismic image, said seismic image comprising a stacked time section representing horizons within said region, comprising:

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1   a)   picking a first selected horizon from said seismic image;

2   b)   calculating a set of instantaneous amplitudes and frequencies for said

3   first selected horizon;

4   c)   determining the average amplitude and frequency of said set of

5   instantaneous amplitudes and frequencies;

6 d)   identifying pressure gradients associated with said instantaneous amplitudes

7 and frequencies to generate a pressure gradient map, said pressure gradients

8 corresponding to points at which said instantaneous amplitudes and frequencies

9 vary from said average amplitude and frequency, wherein points at which said

10 instantaneous amplitudes and frequencies are less than said average amplitude and

11 frequency correspond to locations of relatively low pressure].

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